



## Steam Turbines

The photo shows a radial inflow steam turbine and water pump ready for shipment to a Gulf Coast refinery for application to a cooling tower circulating water system. It is representative of a line of high-efficiency, energy-conserving turbines produced by Turbonetics Energy, Inc., a subsidiary of Mechanical Technology, Inc., (MTI) Latham, New York. Turbonetics' steam turbines are used as power generating systems in the oil and gas, chemical, pharmaceutical, metals and mining, and pulp and paper industries.

Development of the Turbonetics line benefited from use of NASA research data on radial inflow steam turbines and from company contact with personnel of Lewis Research Center. The company's product engineering group also uses Lewis-developed computer

programs to determine performance characteristics of the turbines.

Another MTI group—the Research and Development Division—is making use of NASA technology in work for the Office of Naval Research on an Axial Compressor Test Development Project. This project aims at expanding the technology of using helium as a motive fluid for high-efficiency turbomachinery. In designing a helium compressor test system for study of compressor blade efficiency and other performance characteristics, the division applied the Lewis-developed Computer Programs for Axial Flow Compressor Design. MTI reports substantial time and money savings through use of the programs, which were made available by NASA's Computer Software Management and Information Center (COSMIC)<sup>®</sup> at the University of Georgia.

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